$f(t) = 2 + 4\cos(2\pi \cdot 4 \cdot t) + 10\cos(2\pi \cdot 5 \cdot t) + 8\cos(2\pi \cdot 6 \cdot t)$

c_k for $k = [0, 8]$ $\quad c_k = \frac{1}{2}(a_k - ib_k)$

a.)

$c_0 = 2$ $\quad c_5 = 5$

$c_1 = 0$ $\quad c_6 = 4$

$c_2 = 0$ $\quad c_7 = 0$

$c_3 = 0$ $\quad c_8 = 0$

$c_4 = 2$

$c_4 = \frac{1}{2}(4 - 0) = 2$

$c_5 = \frac{1}{2}(10 - 0) = 5$

$c_6 = \frac{1}{2}(8 - 0) = 4$

$c_0 = 2$ $\quad c_5 = 5$

$c_1 = 0$ $\quad c_6 = 4$

$c_2 = 0$ $\quad c_7 = 0$

$c_3 = 0$ $\quad c_8 = 0$

$c_4 = 2$